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## THE ROLE OF MIDDLE LEVEL MANAGEMENT ON IMPLEMENTATION OF DIGITAL TRANSFORMATION

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### Abstract

*Middle level management role on implementation of digital transformation is pivotal. It is an important link between senior management and frontline staff ensuring effective communication, capacity building and proper allocation of resources. This unique position enables them to translate strategic objectives into actionable plans ensuring alignment with organizational goals. This study is based on the interpretivism paradigm which seeks to understand the context and meaning of existing literature on digital transformation and middle management. The literature review undertaken was based on 90 journals and articles for the period 2016 to 2024. The study has identified functions of middle management such as facilitating communication, capacity building, allocation of resources and alignment of organizational culture with digital initiatives. Various theories underpin this study including role theory, resource-based view, dynamic capabilities theory, and interactional model of communication. Notwithstanding this important role of middle management, there is limited literature. The study will address this gap by demonstrating how the contribution of middle management is vital for successfully steering the complexities of digital initiatives. The study findings highlight the importance of organizations leveraging the capabilities of middle management to enhance their digital transformation initiatives and as a result encourage their empowerment through capacity building.*

**Key words:** *Digital transformation, Middle management, Resource allocation, Training, Communication and Organizational culture*



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## Introduction

Digital transformation results in a significant shift impacting how organizations function including adoption of technologies to optimize processes including customer experience (Fachrunnisa, Adhiatma, Lukman & Ab Majid, 2020; Kraus, Jones, Kailer, Weinmann, Chaparro-Banegas, & Roig-Tierno, 2021). Digital transformation includes the integration of digital technologies to revolutionize organizations resulting in changes to products, services and business models (Hartl, 2019). Digital strategy implementation pertains to the process by which organizations convert the established digital strategy into a definitive plan and corresponding actions (Agustian, Mubarak, Zen, Wiwin, & Malik, 2023). It involves three stages: digitization (converting processes into digital formats), digitalization (integrating technologies to refine processes), and transformation (reconfiguring business models). This process requires leadership capabilities such as problem-solving skills, relational trust-building abilities, adaptability in evolving environments. Middle-level managers play a crucial role in this process by bridging the gap between strategic objectives set by top management and operational realities faced by frontline personnel (Abdullah & Sofyan, 2022; Paavola, Hallikainen & Elbanna, 2017). They are essential for translating overarching strategies into actionable plans that can be executed at the operational level. Middle level managers have strategic influence in fronting the strategies stipulated by top management to frontline staff ensuring

its implementation (Paavola, et al., 2017). The ability of middle level management to maneuver organizational complexities allows them to effectively implement digital transformation. Successful translation of high-level strategies into deliverables is a critical role played by middle managers as they create an enabling environment for digital initiatives. Their role cuts across an array of areas including resource allocation, communication and training (Alawiah & Tukiran, 2024).

## Statement of the Problem

Organizations seeking to maintain a competitive age must embrace digital transformation as a strategy to survive the increasingly technologically savvy market (Plekhanov, et al., 2023; Agustian et al., 2023; Zreil, 2024). The process includes integration of digital technology that enables changes across the operating spectrum including frameworks, resources, processes and stakeholder engagements as well as innovation to alter existing models. Organizations are gradually accepting technologies like cloud computing, artificial intelligence (AI), and big data analytics to strengthen efficiency and consumer experiences including innovation. According to International Data Corporation (2024), notwithstanding the significant investments, projected to total USD\$ 3.9 trillion by 2027, several organizations encounter difficulties in realizing successful transformations with approximately 50% of organizational changes and 40% of changes in technology realizing their objectives. Facilitating the effective implementation of digital



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transformation efforts is essential for organizations seeking to succeed in the contemporary organization environment. This study aims to understand the role played by middle level managers in the successful implementation of digital transformation by identifying the primary roles.

### General Objective

The study aims to review extant literature on the role of middle level managers on implementation of digital transformation.

### Specific Objectives

- i. To examine extant literature on communication channels and
- v.

implementation of digital transformation.

- ii. To examine extant literature on training initiative and implementation of digital transformation.
- iii. To examine extant literature on resource allocation and implementation of digital transformation.
- iv. To examine extant literature on the moderating effect of organizational culture on the role of middle management and implementation of digital transformation.

### Conceptual Framework

Figure 1 shows the relationship between the variables.

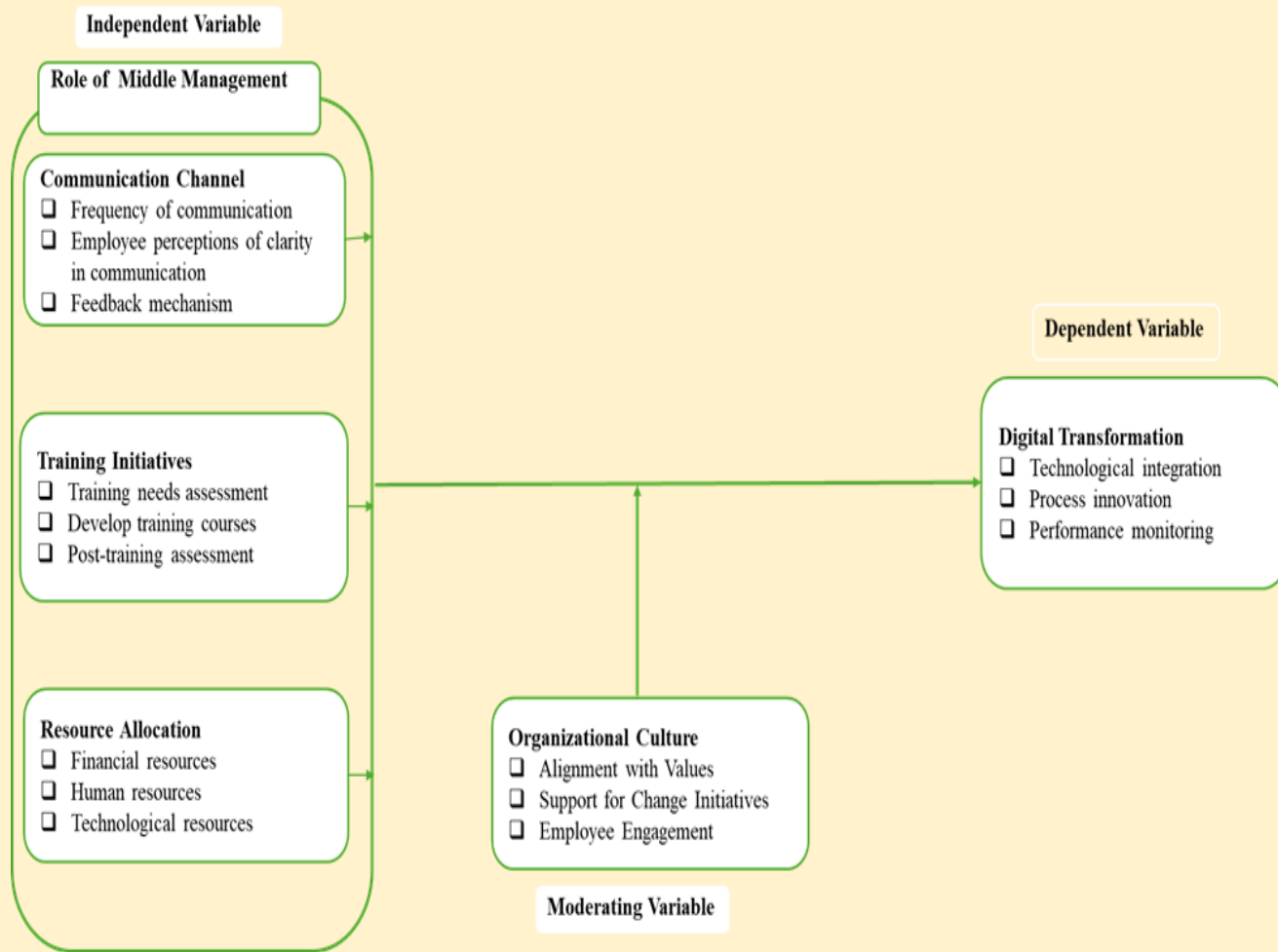


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## Literature Review

The study reviews the role of middle level managers on implementation of digital transformation focusing literature postulated in this area. Resource-based theory postulated by Barney in 1991 emphasized the importance of internal resources and competencies as an enabler for competitive advantage (Miller, 2019). It argues that organizational resources are diverse and not easily replicated and are unique. It stresses the need to have dynamic capabilities, which enable organizations to sense environmental changes, seize opportunities and adapt resources accordingly (Bäck, Bäck and Author, 2020). This dexterity is essential for managing the complexities of digital transformation, allowing organizations to react promptly to market disruptions and changing client demands.

Dynamic capabilities theory postulated by Teece, 1997, provides a solid foundation for understanding how organizations nurture and use their skills to adapt to changing contexts and drive effective digital transformation. Dynamic capabilities facilitate organizations in integrating, developing, and reconfiguring their resources and skills to adapt to swiftly evolving contexts (Pitelis, and Wagner, 2019). Studies demonstrate that dynamic capabilities empower organizations to adjust to evolving business environments, foster innovation, and modify their organizational frameworks in reaction to digital issues (Ellström, Holtström, Berg & Josefsson, 2021). They are prospective in nature, focusing on determining the firm's future direction, securing necessary resources, and establishing the most appropriate organizational design. They enable organizations to realign their blueprint and resources to attain lasting competitive advantages and enhanced results in swiftly evolving settings. Essential procedures recognized for digital transformation include digital sensing, strategy formulation, and infrastructure building. For dynamic capacities to be robust, management must exhibit entrepreneurial qualities. Managers must engage in formulating and evaluating ideas regarding emerging technical and market trends, creating and

enhancing new business models, and coordinating the requisite resources both internally and externally. This proactive, entrepreneurial mindset must permeate the entire organization.

Role theory, postulated by Ralph Linton and George Herbert Mead in 1940s, offers a theoretical framework for understanding social behaviour and relationships, particularly within leadership and organizational settings. It focuses on the significance of social roles, interactions, and agency within organizations. Role theory encompasses five key ideas: systematic behaviors, societal positions, expectations, position persistence over time, and individuals' socialization into their roles (Christodoulou, et al., 2022). When applied to middle managers, role theory helps explain how they navigate complex expectations, responsibilities, and interactions within an organizational hierarchy. However, it has been criticized for failing to consider an individual's subjective experience during role performance and overlooking the innovative capacity of individuals as they adapt to their surroundings. Critics also argue that the theory is deficient regarding the motivational dimensions of behavior and that individual changes may not be sufficient without considering the broader social context in which these individuals operate (Rakovic, 2024).

Resource allocation theory, developed by Joseph L. Bower in 1970, emphasizes the deliberate selection and distribution of resources in alignment with Organizational objectives. This theory analyses the methods by which Organizations allocate their finite resources across competing activities to fulfill their strategic goals (Bower, 2016). Effective resource allocation seeks to optimize efficiency and production while reducing waste, necessitating a balance between conflicting requirements and objectives within an organization. The theory emphasizes the significance of strategic planning and oversight to adjust to evolving conditions and guarantee effective resource allocation. Managers tasked with resource allocation recognize the significance of project selections (operating and capital budgeting), but argue that a more critical



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aspect of the process may be the generation of potential projects and the selection of which projects to advance by lower management levels from the array of possibilities created. Research highlights the relationship between effectively allocated resources and successful realization of organizational objectives. The opposite is also true that improper allocation of resources has a ripple effect on the overall success of organizational objectives. This theory has been criticized for its oversimplification and ignoring the importance of entrepreneurship skills in resource allocation. It has also failed to account for the complexities of real-world situations. The Interactional Model of Communications is based on the non-linear, dialogical and activity-based aspects of human interactions, capturing the complexity reality of communication (Wardyaningrum, Pratiwi, Fitriyanti, Hikmawati, & Herjuno, 2023). This model has been used to examine communication dynamics and highlights the significance of meaning-making and individual experiences in digital transformation. Digital transformation encompasses an interaction-driven perspective connecting business, society, and technology (Wardyaningrum, et al., 2023).

Daniel Denison developed the Denison Model of organizational culture. It assesses organization culture based on four key areas namely, consistency, involvement, adaptability and mission (Trenerry, Chng, Wang, Shuhaila, Lim, Lu & Oh, 2021). Research found that adaptability, mission, customer experience and digital strategy has huge impact on digital transformation (Petrova & Spatenka). Organizational culture is essential for the success of digital transformation and must receive enough attention. The model highlights how cultural characteristics and organizational performance are related, stating that organizations with strong cultural characteristics typically outperform their competitors in a number of areas, such as employee satisfaction and financial performance.

Agustian et al. (2023) asserts that organizations that effectively implement digital technology can improve operational efficiency, lower production costs, and achieve a competitive edge. They note that

digital transformation has created new opportunities for organizations to establish stronger relationships with their customers, leveraging Social, mobile, analytics, cloud, and internet of things technologies (Cristache, Pricopoaia, Năstase, Șișu, Tîrnovanu, & Mătiș, 2024). Competitive advantage in the digital era is often inextricably connected to an organization's capacity to promptly and effectively accept new technologies. Gong and Ribiere (2021) attempted to develop a unified definition of digital transformation, analyzing 134 definitions that portrayed the complexity of the concept encompassing many defining attributes. Kraus et al. (2021) conducted a systematic literature review of 39 high-quality, peer-reviewed scholarly articles on digital transformation, elucidating diverse definitions of the concept, including the use of technology to enhance performance, the realignment of business models, alterations in structures, culture, and beliefs, the integration of technology into various business processes, and the adaptability of leadership.

Paavola et al. (2017) recognized four roles of middle managers in modular digital transformation: championing alternatives, synthesizing information, facilitating adaptability, and implementing deliberate strategy to pursue those opportunities. The study concluded that middle management champion choices by proactively backing specific issues within organizations and seeking to convince senior management to adopt a specific strategic pathway. In their capacity, they are able to synthesize and interpret information in strategic frameworks. Middle level managers are able to cultivate flexible organizational structures by promoting flexibility. This facilitates the emergence of innovative practices within the organization. Jaoua (2018) outlined four functions of middle managers: synthesizing information, promoting alternatives, implementing intentional strategies, and facilitating flexibility. The empirical research reviewed demonstrated that between 50% and 80% of strategy implementation efforts fail (Jaoua, 2018). The study further demonstrated a lack of a unified definition of middle managers with general reference to managers located



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hierarchically below top managers and above the first level of supervisors (Jaoua, 2018).

Abdulla et al. (2022) highlighted the role of middle managers in facilitating communication between top management and lower managers and subordinates, fostering collaboration and sharing information across departments. They also serve as the organizational adhesive during digital transformation, facilitating communication between upper management and users while actively incorporating ideas from all stakeholders. However, the study failed to review personality traits that could impact the successful execution of digital transformation initiatives (Abdulla et al., 2022). Bower (2017) highlights the crucial role played by middle managers as resource allocators, a function that profoundly influences operational efficiency and strategic coherence. Resource allocation is the essence of strategy and is dispersed across organizations. Liu & He (2024) examined the effect of digital transformation on enterprise resource allocation efficiency in Chinese A-share listed manufacturing companies from 2007 to 2019. The study found that enterprise resource allocation efficiency has increased dramatically as a result of digital transformation, and digital transformation increases the effectiveness of resource allocation by drawing in outside funding, including debt and equity investment. Cortellazzo, Bruni, and Zampieri (2019) argue that digital transformation requires a leadership style that integrates visionary and transformational leadership with digital competencies, including digital knowledge. Leadership competence is the capacity to anticipate, imagine, maintain adaptability, engage in strategic thinking, and collaborate with others to implement changes that foster a sustainable future for the organization (Qawasma, & Ali, 2024). Leaders need to adopt a more comprehensive leadership style, ensuring they solicit and consider followers' input in daily decision-making through bidirectional communication and interaction.

Chiguvi, Zaranyika, Marozwa, and Zhou (2023) found that the digital transformation of the Zimbabwean life insurance sector was positively

impacted by resource allocation. Managers in the life insurance sector hire tech-savvy employees to guarantee the success of their digital transformation and appoint consultants to assist them in their digitalization process. However, the study focused on insurance firms, which limits the generalization of the findings. Trenerry et al., (2021), highlighted the rising adoption of modern technology as being correlated with escalating skill shortages in the labor market. Prominent industry reports forecast that numerous firms will see widening skills gaps (Patel & Mishra, 2023) in the coming years, as employers increasingly seek candidates possessing a diverse skill set, including critical thinking, analytical and problem-solving abilities, self-management, adaptability, and resilience (Trenerry et al., 2021). The majority of organizations worldwide currently possess a skills gap or are projected to encounter one in the coming years. Brunetti, Matt, Bonfanti, De Longhi, Pedrini, and Orzes, (2019), emphasize the importance of leadership in preparing workplaces for digital transformation. They suggest that leaders need to adopt a more inclusive leadership style, focusing on ethical behavior in leaders, and addressing the needs of employees and stakeholders in the digital transformation process.

Digital transformation is a major challenge for regional innovative systems, necessitating strategic measures based on three key pillars: digital education, talents, and digital culture (Brunetti, et al., 2020). Viterouli, Belias, Koustelios, Tsigilis, and Papademetriou (2024), highlights the need for flexibility in the face of technology shocks, the complexities of globalization, and the changing dynamics of the workforce. This study explores tailored training initiatives for general organizational transformations. Hartl (2019), found that digital culture change is initiated by digital technologies and is overseen through a hybrid strategy that integrates both planned/top-down and emergent/bottom-up methodologies. Although rapid transformation is characteristic, it ultimately engenders a culture of perpetual change. Martínez-Caro et al., (2020), recognized the significance of Organizational culture in digital transformation, which modifies firms'



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environments and compels them to cultivate a culture conducive to functioning in a progressively volatile landscape. Organizational culture is a determinant that affects the efficacy with which an organization adopts digital technologies. An organization with a more adaptable culture is likely to have greater success with new technologies compared to one with a rigid culture. Organizations must actively participate in the intricate yet essential process of organizational change, with managers accountable for fostering progressive employee views towards digitalization. Cultural factors must be integrated, as altering organizational behavior requires more basic activities than just pro-environmental decisions.

## Methodology

This study is anchored within the interpretivism paradigm that seeks to understand the context and meaning behind existing literature on digital transformation and middle level management. The study undertook a desk review that examined extant literature. 90 journals and articles were extracted using key words namely, digital transformation, middle level management, training, communication, resource allocation and leadership published by other authors. It analyzed and synthesized existing data limited to peer reviewed journals and articles for the period 2016 to 2024 with the exception of two articles for the period 2010 and 1991 which provided knowledge on emergence of digital transformation. The search for journals and articles was done using google scholar and EBSCO Host databases.

## Findings of the study

This study emphasized the important role of middle managers as conduits between top management and frontline employees, ensuring effective communication of strategic objectives and operational realities. It further demonstrated the pivotal role played by middle managers in identifying skill gaps and customizing training programs to align with organizational objectives, including effective allocation of resources to support digital initiatives. This study carries substantial inferences for organizations seeking to implement digital transformation. From the onset, organizations should invest in empowering the middle managers

through provision of resources, training and capacity building. Empowerment facilitates the fulfillment of roles in an effective manner while bridging the gap between strategy and execution. Middle managers require tailored learning programmes to ensure their capacity is enhanced specifically related to digital learning. The strategic influence of middle managers should be recognized early to ensure their integration in the planning process. It is important that further research be undertaken on the dynamics of middle managers based on their evolving roles specifically in the context of digital advancements.

## Discussions

This research demonstrated the critical role played by middle level managers that enable organizations to successfully realize digital transformation as they serve as intermediaries between senior management and frontline staff (Alwawiah & Tukiran, 2024). Their efforts are important in ensuring alignment of digital initiatives with organizational objectives and encouraging frontline staff to fully engage. Their role has aided navigating intricacies of digital transformation, which is progressively acknowledged as a fundamental for organizations across diverse sectors (Huang, Guo & Yan, 2025). The study highlights that successful digital transformation depends on the commitment of middle managers, who bridge the divide between strategy formulation and implementation.

Even though the role of middle management is critical in the implementation of digital transformation, the subject is underexplored in existing literature. The study seeks to address this emphasizing the crucial role middle managers play in fostering organization culture and change management (Abdullah & Sofyab, 2022; Paavola et al., 2017). The unique position of middle managers allows them to influence the accomplishment of digital initiatives and alignment of broader organizational objectives. The capabilities of middle managers should be recognized and leveraged to enhance digital transformation initiatives. Empowerment of middle managers including allocation of sufficient resources can enable



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organizations to navigate the challenges associated with implementing digital transformation. This study reinforces that successful implementation of digital transformation is dependent on the involvement of middle management including their role in building capacity of their teams, effectively communicating and ensuring the resources are distributed effectively. It is imperative that organizations that strive for successful digital transformations have to support middle management to optimize their capacity and facilitate achievement of the strategic goals in the evolving digital landscape.

### Conclusion

In the implementation of digital transformation, middle should be provided with the necessary tools and authority to facilitate their functions. This includes and is not limited to access to information, knowledge and authority to make decisions thereby enabling them to be effective. Open communication between top and middle level managers, including proper feedback mechanisms, are important to ensure strategic ambitions are correctly understood and conveyed across the organization. The development of tailored training courses for middle management focusing on digital literacy, change management and leadership qualities should constitute the developed organizational plans. Organizations should recognize middle management who effectively implement digital projects as this will foster a culture of change acceptance and innovation. Organizations should recognize middle management who effectively implement digital projects as this will foster a culture of change, acceptance and innovation. The study proposes further research on the changing roles of middle managers within organizations especially in the evolving digital context.

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